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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,737	04/16/2004	G. Glenn Henry	CNTR.2210	8491
23669	7590	10/27/2006	EXAMINER	
HUFFMAN LAW GROUP, P.C. 1900 MESA AVE. COLORADO SPRINGS, CO 80906			JIANG, CHEN WEN	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/825,737

**Applicant(s)**

HENRY ET AL.

**Examiner**

Chen-Wen Jiang

**Art Unit**

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/24, 10/4, 10/19</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (U.S. Patent Number 7,006,943) in view of Hussain et al. (U.S. Patent Number 6,172,611).

In regard to claims 1,4,5,7,10,12,13,15 and 18, Mitchell et al. disclose a method and apparatus for using an on-board temperature sensor on an integrated circuit or a microprocessor. Referring to Figs.1 and 4, the device comprises a microprocessor 101,401, temperature sensor 103 provided on-die thermal monitoring to measure the temperature of the die, temperature limit registers 105, compare login 107 and cooling device 109 or fan 405. However, Mitchell et al. do not disclose variable fan control signal directly coupled to an external fan. Hussain et al. disclose fan controller 150 directly coupled to the fan 150 in the same field of endeavor for the purpose of temperature control. Therefore, it would have been obvious to one having ordinary skill in the

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art at the time the invention was made to provide the apparatus of Mitchell et al. with an directly coupled fan in view of Hussain et al. so as to control the temperature.

In regard to claims 2,3,8,9,16 and 17, Mitchell et al. disclose the can turn on and off the fan (col.1, line 19) and control the speed of the fan (col.5, line 9).

In regard to claim 11, it would have been obvious to one of ordinary skill in the exercise art to substitute the prior art recognized equivalent one for other. In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982).

In regard to claims 6,14,19 and 20, Hussain et al. disclose a temperature sensor that is remote from or external to thermal management IC 140 in the same field of endeavor for the purpose of temperature control.

3. Claims 1-5,7-13, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moyal (JP 07209091) in view of Seesemann (U.S. Patent Number 6,384,733).

In regard to claims 1-5,7-10,12,13, and 15-18, Moyal discloses a sensing signal generating device for temperature of microprocessor. Referring to Figs.1 and 2, the device comprises a microprocessor 10, temperature sensor 15 and control circuit 28. The temperature sensor 15 is embedded in the integrated circuit. The control circuit controls the fan speed. The temperature sensing elements comprise diodes 42 and 44. Moyal discloses the invention substantially as claimed. However, Moyal does not disclose fan control and arrangement. Seesemann discloses fan device 120 with increase the fan speed at a rising temperature or decrease it at a falling temperature in the same field of endeavor for the purpose of cooling the microprocessor. Therefore, it would have been obvious to one having ordinary skill in the art at

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the time the invention was made to provide the apparatus of Moyal with a fan arrangement with speed control in view of Seesemann so as to cool the microprocessor.

In regard to claim 11, it would have been obvious to one of ordinary skill in the exercise of art to substitute the prior art recognized equivalent one for another. In re Fout, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982).

4. Claims 6, 14, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moyal/Seesemann as applied to claims 1, 7 and 15 above, and further in view of Hussain et al. (U.S. Patent Number 6,172,611).

Moyal/Seesemann disclose the invention substantially as claimed. However, Moyal/Seesemann do not disclose temperature information from an external interface. Hussain et al. disclose a temperature sensor that is remote from or external to thermal management IC 140 in the same field of endeavor for the purpose of temperature control. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Moyal/Seesemann with an external sensor in view of Hussain et al. so as to control the temperature.

### *Conclusion*

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809. The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chen-Wen Jiang  
Primary Examiner

